

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A glycosylation-deficient hepatocyte growth factor ~~lacking the sugar chain(s) at all or at least one of the glycosylation sites of hepatocyte growth factor~~ having no sugar chains, wherein and having mutations in its amino acid sequence so that no glycosylation occurs at any glycosylation sites of the hepatocyte growth factor.

2-3. (Cancelled)

4. (Previously Presented) The glycosylation-deficient hepatocyte growth factor according to claim 1, wherein the hepatocyte growth factor is human hepatocyte growth factor.

5. (Previously Presented) The glycosylation-deficient hepatocyte growth factor according to claim 1, wherein the hepatocyte growth factor is feline or canine hepatocyte growth factor.

6. (Currently Amended) The glycosylation-deficient hepatocyte growth factor according to claim 1, which is modified based on the amino acid sequence of SEQ ID NO: 1, wherein ~~at least one of~~ modifications represented by (a) to (e) below ~~is~~ are applied to the amino acid in SEQ ID NO: 1:

(a) substitution of amino acid 294 and/or 296 by another amino acid, and/or substitution of amino acid 295 by Pro, leading thereby to no glycosylation of the amino acid 294;

(b) substitution of amino acid 402 and/or 404 by another amino acid, and/or substitution of amino acid 403 by Pro, leading thereby to no glycosylation of the amino acid 402;

(c) substitution of amino acid 476 by another amino acid, resulting in no glycosylation of the amino acid 476;

(d) substitution of amino acid 566 and/or 568 by another amino acid, and/or substitution of amino acid 567 by Pro, leading thereby to no glycosylation of the amino acid 566; or

(e) substitution of amino acid 653 and/or 655 by another amino acid, and/or substitution of amino acid 654 by Pro, leading thereby to no glycosylation of the amino acid 653.

7. (Currently Amended) The glycosylation-deficient hepatocyte growth factor according to claim 1, which is modified based on the amino acid sequence of SEQ ID NO: 2, wherein at ~~least one of~~ modifications represented by (a) to (e) below ~~is~~ are applied to the amino acid in SEQ ID NO: 2:

(a) substitution of amino acid 289 and/or 291 by another amino acid, and/or substitution of amino acid 290 by Pro, leading thereby to no glycosylation of the amino acid 289;

(b) substitution of amino acid 397 and/or 399 by another amino acid, and/or substitution of amino acid 398 by Pro, leading thereby to no glycosylation of the amino acid 397;

(c) substitution of amino acid 471 by another amino acid, leading thereby to no glycosylation of the amino acid 471;

(d) substitution of amino acid 561 and/or 563 by another amino acid, and/or substitution of amino acid 562 by Pro, leading thereby to no glycosylation of the amino acid 561; or

(e) substitution of amino acid 648 and/or 650 by another amino acid, and/or substitution of amino acid 649 by Pro, leading thereby to no glycosylation of the amino acid 648;

8. (Currently Amended) A DNA comprising a base sequence encoding the ~~glycosylation-deficient~~ hepatocyte growth factor according claim 1.

9. (Original) A vector integrated with the DNA according to claim 8.

10. (Currently Amended) A method for producing the glycosylation-deficient hepatocyte growth factor according to claim 1 comprising the steps of: introducing a vector integrated with a DNA comprising a base sequence encoding the glycosylation-deficient hepatocyte growth factor ~~according to claim 1~~ having no sugar chains into a cell; culturing the cell; producing a glycosylation-deficient hepatocyte growth factor in the cell or into the cell culture medium; and recovering and purifying the glycosylation-deficient hepatocyte growth factor from the cell or from the cell culture medium.

11. (Original) The method according to claim 10 for producing the glycosylation-deficient hepatocyte growth factor, wherein the cell is a eukaryotic cell.

12. (Original) The method according to claim 11 for producing the glycosylation-deficient hepatocyte growth factor, wherein the eukaryotic cell is a yeast or an insect cell.

13. (Currently Amended) A method for producing the glycosylation-deficient hepatocyte growth factor according to claim 1, comprising the steps of: introducing a vector integrated with a DNA comprising a base sequence encoding the glycosylation-deficient hepatocyte growth factor ~~according to claim 1~~ having no sugar chains into an insect individual, allowing the insect individual to produce the glycosylation-deficient hepatocyte growth factor, and recovering and purifying the glycosylation-deficient hepatocyte growth factor from the insect individual.

14. (Currently Amended) A method for producing the glycosylation-deficient hepatocyte growth factor according to claim 1, comprising the steps of: removing the sugar chain(s) wholly ~~or partially~~ by treating hepatocyte growth factor having sugar chain(s) with an enzyme, and recovering and purifying the glycosylation-deficient hepatocyte growth factor from the enzyme reaction solution.

15. (Currently Amended) A method for producing the glycosylation-deficient hepatocyte growth factor according to claim 1, comprising the steps of: introducing a vector integrated with a DNA containing a base sequence encoding hepatocyte growth factor having sugar chain(s) or a vector integrated with a DNA comprising a base sequence encoding the glycosylation-deficient hepatocyte growth factor ~~according to claim 1~~ having no sugar chains into a cell having no glycosylation ability; culturing the cell; allowing the cell to produce a glycosylation-deficient hepatocyte growth factor in the cell or into the cell culture medium; and recovering and purifying the glycosylation-deficient hepatocyte growth factor from the cell or cell culture medium.

16. (Currently Amended) A method for producing the glycosylation-deficient hepatocyte growth factor according to claim 1, comprising the steps of: synthesizing the glycosylation-deficient hepatocyte growth factor by a cell-free protein synthesis system using a gene comprising a base sequence encoding hepatocyte growth factor having sugar chain(s) or a base sequence encoding the glycosylation-deficient hepatocyte growth factor ~~according to claim 1~~

having no sugar chains as a template and recovering and purifying the glycosylation-deficient hepatocyte growth factor from the reaction solution.

17. (Currently Amended) A pharmaceutical preparation comprising the glycosylation-deficient hepatocyte growth factor according to claim 1 as an active ingredient and a conventional carrier or binder.

18. (Currently Amended) A gene therapy agent containing the DNA according to claim 8 and a gene carrier.